HIGH POWER DENSITY INVERTER AND COMPONENTS THEREOF

ABSTRACT

A compact high-power pure-sinewave inverter amenable to mass manufacturing techniques. Methods for increasing the power rating, power density and/or power conversion efficiency of a sinewave-modulated pulse-width-modulated (PWM) inverter having a either half-bridge or full-bridge topology, including minimizing uncoupled inductances and loop inductances in the primary winding(s) by employing either ribbon-like conductors having a high crossectional aspect ratio or litz-wire. A compact linear heatsink adapted to cool a row of semiconductor devices (such as inverter switches) mounted on a high-current printed circuit board. Methods for inexpensive manufacture of a fluid-cooled linear heat sink. A transformer including a filter inductor core.